



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Gene C. Koch,
Bruce K. Winker, and
William J. Gunning, III,

For: SPLAY/TWIST COMPENSATOR FOR
IMPROVED GRAY SCALE PERFORMANCE
IN TWISTED NEMATIC LIQUID CRYSTAL
DISPLAYS

Honorable Commissioner of Patents and
Trademarks
Washington, DC 20231

§ Serial No: 08/313,476
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§ Filed: 30 September 1994
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§ Group Art Unit: Unknown
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§ Examiner: Unknown
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§ Atty Dkt: 94CR091
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CERTIFICATE OF MAILING (37 C.F.R. 1.8)

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10 MAY 95
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INFORMATION DISCLOSURE STATEMENT

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is requested that this
Information Disclosure Statement (IDS) be entered and that the listed references in the attached PTO form
1449 be considered by the Examiner and made of record. Copies of the listed references are enclosed for
the convenience of the Examiner. A copy of the European Patent Office (EPO) Search Report, from which
the cited references were obtained, is also enclosed for the benefit of the Examiner.

In addition to the references listed in the attached form 1449, the following references were
identified in EPO searches performed for co-pending and commonly assigned U.S. patent applications that
relate, generally, to the same technological field. (U.S. serial numbers: 08/223,251; 08/313,477;
08/313,478; 08/313,509; 08/313,510; 08/313,531; 08/313,532.) The following information is provided
solely for the Examiner's convenience.

1. U.S. patent 5,311,340, issued on 10 May 1994 to Murata et al.
2. U.S. patent 5,309,264, issued on 3 May 1994 to Lien et al.

3. U.S. patent 4,874,664, issued on 17 October 1989 to Hamaguchi et al.
4. European patent document 0 613 037 A2, published 31 August 1994 for Sharp Kabushiki Kaisha.
5. European patent document 0 576 342 A1, published 29 December 1993 for Thompson Consumer Electronics.
6. European patent document 0 576 304 A1, published 29 December 1993 for Sharp Kabushiki Kaisha.
7. European patent document 0 543 678 A1, published 26 May 1993 for Nippon Oil Co., LTD.
8. European patent document 0 367 288 A2, published on 9 May 1990 for Fuji Photo Film Co., LTD.
9. European patent document 0 535 324 A1, published 7 April 1993 for Optrex Europe GmbH.
10. Switzerland-Liechtenstein patent document CH 661 361 A5, published 15 July 1987 for BBC Aktiengesellschaft Brown, Boveri & Cie., Baden.
11. Crandall et al., "Homeotropic, Rub-Free Liquid-Crystal Light Shutter," Appl. Phys. Lett., Vol. 65, No. 1, 1994, pp. 118-120.
12. Hamaguchi, "Phase Compensation Plate," Patent Abstracts of Japan, Vol. 14, No. 301, 1990, pp. 1069.
13. Hodgkinson et al., "Measurement of the Principal Refractive Indices of Thin Films Deposited at Oblique Incidence," J. Opt. Soc. Am. A, Vol. 2, No. 10, 1985, pp. 1693-1697.
14. Motohiro et al., "Thin Film Retardation Plate By Oblique Deposition," Applied Optics, Vol. 28, No. 13, 1989, pp. 2466-2482.
15. Yang, "Two-Domain Twisted Nematic and Tilted Homeotropic Liquid Crystal Displays for Active Matrix Applications," IEEE International Display Research Conference, 1991, pp. 68-72.
16. Yoshihiro, "Organic Film for Optical Compensation and Production Thereof," Patent Abstracts of Japan, Vol. 13, No. 540, 1990, pp. 969.
17. "Multicolor Parallel-Oriented Nematic Liquid Crystal Displays Using Optical Compensation Films," IBM Technical Disclosure Bulletin, Vol. 33, No. 12, 1991, pp. 201-202.
18. "Normally White Negative Birefringence film Compensated Twisted Nematic Liquid Crystal Displays with Improved Optical Performance, IBM Technical Disclosure Bulletin, Vol. 36, No. 09B, 1993, pp. 361.

In accordance with 37 C.F.R. §§ 1.97(b)(3) and 1.98, the filing of this IDS and submission of the cited references should not be construed as an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b), or as a representation that no other possibly material information exists.

No fee is believed to be necessary for the present IDS since it is being filed prior to the mailing of a first Office Action on the merits. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayments, to Deposit Account No. 01-2508/TOE.

Respectfully submitted,

Date: 10 May 95



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